



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Elko District Office
3900 East Idaho Street
Elko, Nevada 89801

http://www.blm.gov/nv/st/en/fo/elko_field_office.html



In Reply Refer To:
4130 (NVE0300)

Final Conclusions and Determinations Hubbard Vineyard Allotment Allotment Specific Multiple Use Objectives Standards and Guidelines for Rangeland Health May 2010

On 30 June 2009 the Wells Field Office released the Hubbard Vineyard Allotment Evaluation (AE). The final determinations and conclusions outlined in this document are supported by the analysis of data presented in the evaluation, which is available for review on the internet at the following address:

http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_information/nepa.html

1. General Land Use Plan Objectives (RMP)

Attainment or non-attainment of these objectives are included under conclusions for allotment Rangeland Program Summary (RPS), O'Neil/Salmon Falls Habitat Management Plan (HMP), Riparian, and Key Area objectives.

1.1 Rangeland Program Summary (RPS)

1.1.1 Livestock Grazing

1. Improve livestock distribution in the Lower Hubbard Basin, Big Devils Table, Boies Reservoir, Cow Basin, and the West side of Cold Springs Mountain.

Undetermined. The original evaluation (1997) determined that, based on use pattern maps, livestock distribution still needed to be improved in the Lower Hubbard Basin, Big Devils Table, Boies Reservoir, Cow Basin, and the West side of Cold Springs Mountain. No additional water developments have been installed. However, the grazing system set in place at the implementation of the HM process has incorporated periodic rest and season of use variations in these pastures. The BLM lacks enough data to make any further determinations of this objective.

2. Improve ecological status in the eastern third of the allotment, particularly the lower elevations of Hubbard Basin.

Not Met. Ecological status of the eastern third of the allotment is measured by key area HV-01. Ecological status measured at key area HV-01 shows generally stable trends. The declines in ecological status observed between 1986 and 1990 had been completely reversed by 2004. The 1990 readings occurred in the middle of an extended drought cycle, while the 2004 readings occurred after a couple years of good precipitation. This tends to indicate that the

variations observed across years are largely driven by precipitation patterns and cycles. The eastern one third of the allotment lies in the immediate rain shadow of the Snake Mountains, and as such is very dry and has poor soils. Both of these factors limit the potential of these sites to improve under any management regime. The dominant species around key area #HV-02 tend to indicate that it lies within an area of multiple ecological sites, which makes drawing any conclusions about ecological status impossible.

3. Maintain the existing ecological status of the Mountain, Upper Hubbard Basin, Bull Camp, and Coon Creek pastures.

Met. The ecological status inventory that was completed in 1986, along with frequency and production studies collected in 1990 and 2004 at key area HV-03, all indicate that the ecological status has been maintained in the Upper Hubbard Basin, Bull Camp, and Coon Creek Pastures.

4. Develop an Allotment Management Plan (AMP) to be signed in FY86.

Some Progress in Being Made. No AMPs have been written for this allotment, but this document is the first step towards creating the functional equivalent of an AMP.

5. Periodically evaluate the monitoring data for the allotment to reinstate suspended non-use AUMs when they become permanently available.

Met. Monitoring data used to determine carrying capacity has been evaluated in the allotment evaluation. However, the suspended non-use AUMs have not been reinstated.

1.1.2 Terrestrial Wildlife Habitat

1. Improve or maintain all seasonal big game habitat in the Hubbard Vineyard Allotment to good or excellent condition to provide forage and habitat capable of supporting the following reasonable numbers:

804 mule deer; 1,407 AUMs
252 antelope; 293 AUMs
10 bighorn sheep; 24 AUMs

Mule deer: Partially Met. Wildfire has impacted approximately 4,358 acres of mule deer range within the Hubbard Vineyard Allotment. The majority of the fire impacts occurred in mule deer summer range. Habitat condition ratings for two of the five key areas were “good” and “fair” in the remaining three. The one study area representing mule deer summer habitat (burned by the Cold Springs Fire in 2000) was “fair.” The predominant limiting factors were inadequate vertical structure and limited forage diversity.

Antelope: Partially Met. Habitat condition ratings for antelope summer range in the Hubbard Vineyard Allotment were all rated as “good.” The one study established in antelope winter range was rated as “fair.” The major limiting factor for the winter range was forb and grass diversity. Forb composition measured in the one winter range key area was 4% and grass composition was 13%. This key area also exhibited significant sagebrush die off with little recruitment.

Bighorn Sheep: Undetermined. No studies have been established to monitor potential bighorn sheep habitats. Approximately 19% of the occupied bighorn habitat burned in the Cold Spring

Fire (2000). As a result of the fire, the vegetation was converted from primarily a sagebrush dominated community to a perennial grass and forb dominated community, which are preferred forages for bighorn sheep (Van Dyke, et al.1983).

2. Facilitate big game movements by modifying 35.1 miles of existing fences to Bureau standards.

Fence Modifications: Met. The Wells RMP allows for 150 miles of fence to be modified within the O'Neil/Salmon Falls Resource Conflict Area (RCA). The O'Neil/Salmon Falls HMP was approved 8 September 1986 and specifically identified 35.15 miles of fence to be modified within the Hubbard Vineyard Allotment. In 1989 and 1990, 36 miles of fence in the Hubbard Vineyard Allotment were evaluated and/or modified. Table 1 lists fence modifications completed or determined to not be needed in the Hubbard Vineyard Allotment.

Table 1. HUBBARD VINEYARD ALLOTMENT FENCE MODIFICATION SUMMARY		
Project #	# Miles	Remarks
0440	6.0	Identified in HMP, evaluated in 1988, determined no action needed.
0419	7.0	Identified in HMP, evaluated in 1988, determined no action needed.
0419	1.0	Identified in HMP, modification completed in 1990.
0937	8.5	Identified in HMP, modification completed in 1990.
0132	9.5	Identified in HMP, modification completed by permittee.
0132	4.5	Identified in HMP, modification completed in 1991.
0735	0.5	Identified in HMP, modification completed in 1990.
	36.0 Total	

3. Reintroduce bighorn sheep into the Badlands.

Met. Twenty-five Rocky Mountain bighorn sheep were released into the Badlands in January, 1989 and twenty-five more in January, 1992. Radio telemetry information provided by the Nevada Department of Wildlife currently estimates the population to be approximately 70 bighorn sheep for the entire L&D Mountain/Badlands Wilderness Study Area vicinity.

1.1.3 Riparian/Stream Habitat

1. Improve 10 springs in the Hubbard Vineyard Allotment to good or better condition.

Met.

Spring areas rated at Proper Functioning Condition are considered to be in good or better condition, while springs rated at Functioning at Risk (FAR) with an Upward Trend or lower lack the vegetative height, density, or cover to justify a good condition rating. The majority of the spring areas in the Hubbard Vineyard Allotment have been assessed twice, once in 2003 and again in 2007. The 2003 assessment evaluated 35 lentic spring and seeps, with 10 rated as Functional-at-risk (FAR) with an upward trend (FAR↑) (29%), 22 were FAR↓ (downward trend) (63%), and 3 were non-functional (NF) (8%). The 2007 assessments evaluated 51 springs, seeps, and reservoirs, with 24 rated as Proper Functioning Condition (PFC) (47%), 3 rated at

Functional-at-risk (FAR) with an upward trend (FAR↑) (6%), 4 rated as Functional-at-risk with no apparent trend (FARN) (8%), 7 rated as FAR↓ (downward trend) (14%), and 11 rated as non-functional (NF) (21%). Two of the sources did not receive any rating (4%). Three of the areas rated non-functional are livestock reservoirs. The objective to improve 10 springs to good or better condition has been exceeded.

The O'Neil/Salmon Falls Habitat Management Plan (HMP) proposed to improve 50 springs in the O'Neil/Salmon Falls RCA. The HMP specifically identifies 25 springs, six of which lie in the Hubbard Vineyard Allotment. The HMP allows flexibility in identifying the remaining 25. The six springs specifically identified in the Hubbard Vineyard Allotment are:

- Leo Spring, Hubbard Basin Pasture, T44N, R62E, S 9, SWNE. This spring was fenced in 1996 and was rated as Proper Functioning Condition in 2007.
- North Twin Ledge Spring, Hubbard Basin Pasture, T43N, R62E, S 1, NESE. This spring was fenced in 1996 and was rated as Proper Functioning Condition in 2003.
- Unnamed Spring, Middle Pasture, T43N, R62E, S 16 SESW. This spring remains unfenced and was rated as Functioning At Risk with an Upward Trend in 2007.
- Corral Spring, Middle Pasture, T43N, R62E, S 22 NESW. This spring remains unfenced and was rated as Functioning At Risk with an Upward Trend in 2003.
- Dry Meadow Spring, Triangle Pasture, T42N, R62E, S 9 SWSE. This spring was fenced in 1996 and was rated as Functioning at Risk with a Downward Trend in 2007.
- Mud Spring, Flat Pasture, T42N, R63E, S 21 NESW. This spring was fenced in 1996 and was rated at Proper Functioning Condition in 2007.

The BLM has completed three additional exclosure projects in the Hubbard Vineyard Allotment:

- S. Fork Jakes Creek exclosure, Middle Pasture, T43N, R62E, S 27 SWNE. Spring rated as Proper Functioning Condition in 2007.
- Zchlitz Spring, Dry Creek Mountain. Pasture, T42N, R61E, S 12 NESW. Spring fenced in 1996 and rated as Functional at Risk with an Upward Trend in 2003. The 2007 assessments looked only at a meadow area adjacent to- and outside of- the spring area that was rated as Functioning at Risk with No Apparent Trend.
- Dry Creek Spring, Dry Creek Mountain Pasture, T42N, R61E, S 13 NENW. Spring fenced in 1996 and rated as Functional at Risk with an Upward Trend in 2003. The 2007 assessments did not evaluate the spring area, with the efforts instead focusing on a seep that came out from underneath of the exclosure fence that was rated Functional at Risk with a Downward Trend.

The 1980-81 Elko District wildlife habitat and water inventory data showed 30 springs within the Hubbard/Vineyard Allotment which were in less than good condition. The 2007 assessment indicates that 27 are now in good condition or in an upward trend.

2. Improve riparian/stream habitat conditions to good or excellent on Dry Creek, Jakes Creek, and Salmon Falls Creek (10.0 miles). Satisfactory progress toward this long-term objective will be measured by a minimum improvement of 30% (from 1979 and 1980 baseline) by 1990.

Note: Due to an editorial error, the RPS used incorrect figures. The objectives should be to improve 1.3 miles of Dry Creek, 5.8 miles of Jakes Creek, and 2.0 miles of Salmon Falls Creek for a total of 9.1 miles of public land stream to be improved.

Table 2: Stream survey/PFC assessment percent optimum summary for 1980 through 2006 (Public land stations only).

Stream Name	Pastures	Year	Bank Cover % Optimum	Bank Stability % Optimum	Pool/Riffle Ratio % Optimum (1)	Pool Quality % Optimum (2)	Streambottom (% desirable)	Riparian Condition (3)	Habitat Condition (4)	Functionality Rating
Jakes Creek	Jakes Creek Mountain, Middle	1980	76%	61%	76%	50%	69%	69%	66%	n/a
		1990	54%	50%	82%	27%	33%	52%	49%	n/a
		2001	59%	64%	58%	19%	43%	61%	48%	8.2 miles PFC 3.9 miles NF
		2006	59%	63%	66%	17%	81%	61%	57%	5 miles FAR↓ 3 miles PFC 12 miles FAR↑
Dry Creek	Dry Creek Mountain, Flat, East and West Hubbard Seedings	1980	64%	30%	0	85%	52%	44%	31%	n/a
		1990	40%	30%	0	0	69%	35%	28%	n/a
		2001	50%	65%	18%	04%	85%	58%	44%	1.2 miles NF
		2006	38%	36%	20%	0%	94%	37%	38%	1.2 miles FAR
Bull Camp Creek	Bull Camp Mountain, Flat, East Hubbard Seeding	1980	68%	65%	74%	0	85%	67%	58%	n/a
		1990	50%	37%	20%	0	56%	44%	32%	n/a
		2001	48%	50%	70%	0	67%	49%	47%	5.8 miles NF
		2006	48%	54%	32%	32%	85%	51%	54%	5 miles NF 4 miles PFC
Salmon Falls River	Devil's Table	1979	42%	45%	92%	15%	30%	44%	45%	n/a
		1988	51%	58%	94%	4%	60%	54%	53%	n/a
		2001	60%	64%	86%	47%	52%	62%	62%	n/a

1. Ratio of pools to riffles. A ratio of 1:1 is considered optimum.
2. Quality pools are large, deep, and well covered with vegetation.
3. Riparian condition percent optimum is the average of bank cover and bank stability. 100% optimum is totally stable streambanks, well vegetated with tall shrubs and/or trees (Duff and Cooper 1976). <49%= poor, 50-59% = fair, 60-69% = good, and >70%= excellent condition.
4. Habitat condition percent optimum is the average of bank cover, bank stability, pool/riffle ratio, pool quality, and percent desirable streambottom materials. 100% optimum is totally stable streambanks, well vegetated with tall shrubs and/or trees; a 1:1 pool/riffle ratio, quality pools, and streambottom substrate comprised of gravel and rubble (Duff and Cooper 1976).

a. Dry Creek

Some Progress is Being Made. A decline in both riparian condition and stream habitat condition was observed on Dry Creek between 1980 and 1990, but both parameters have improved by 30% between 1990 and 2001 (Appendix 3). Both parameters declined again between 2001 and 2006 for the two stations on Dry Creek. Improvements in streambottom desirable material and pool/riffle ratio were observed in 2006, probably reflecting high runoff in the spring of 2006 scouring the stream channel. Functionality improved from nonfunctional (NF) in 2001 to functional at risk (FAR) in 2006.

One of the two stations on Dry Creek was dry in both 1990 and 2001 (Station 1) which limited stream habitat condition analysis to only one station. Stream habitat conditions remained poor in 2006 at 38% with pool/riffle ratio and pool quality as key limiting factors.

Riparian condition is not restricted by dry stream segments and both stations improved to just below good in 2001 (58%), but declined to 37 % in 2006. Both streambank cover and streambank stability had improved since 1990, but declined between 2001 and 2006.

Both functionality and width to depth ratio improved on Dry Creek between 2001 and 2006 (Appendix 3).

While woody riparian vegetative cover is improving on the Dry Creek stream survey sites, both sites are in a downcut stream channel with vertical streambanks. High spring runoff flows appear to be a significant contributing factor in the channel stability rating, although livestock grazing may have been a contributing factor in the past. S-1 is controlled by baserock rubble, while S-3 is a more unstable gravel-sand-silt site. S-3 in particular will take considerable time to recover.

b. Jakes Creek

Met for Jakes Creek Mountain Pasture; Not Met for Middle Pasture. Riparian condition declined between 1980 and 1990 on Jakes Creek, but rebounded by 2001 to good condition (61%) and remained the same in 2006. Bank cover improved on 10 of 12 stations by 2001, while bank stability improved on 7 of 12 stations. Seven of 12 bank cover stations were in good to excellent condition and 9 of 12 streambank stability ratings were good to excellent (Appendix 3). Bank cover and bank stability remained the same between 2001 and 2006.

Stream habitat conditions on Jakes Creek declined between 1980 and 1990 and remained in poor condition (48%) in 2001, but improved to 57% by 2006, mostly because of improved streambottom desirable material and pool/riffle ratio. Riparian and stream habitat condition reflect a change in livestock management practices implemented in 1999. Functionality improved on Jakes Creek with no nonfunctional segments in 2006. The width to depth ratio also improved between 2001 and 2006.

Most of the lower elevation stream survey sites on Jakes Creek and the South Fork of Jakes Creek above Jakes Creek Reservoir are in the Middle Pasture (S-1 through S-5 and SA-1 through SA-3). The Middle Pasture has recently been rested from livestock use one year out of every four, with alternating early season use (prior to the hot season) the other years. Past stream channel downcutting has influenced stream stability at some sites, but upstream sites that are not downcut are improving. Livestock use remains a causal factor for not meeting objectives.

Stream survey sites above S-5 on Jakes Creek and SA-3 on the South Fork Jakes Creek are in the Jakes Creek Mountain pasture which is rested every other year and has a shorter livestock use season. These stream survey sites are generally in good condition and meeting objectives.

c. Salmon Falls Creek

Met. Stream habitat conditions on Salmon Falls Creek improved from 45% of optimum in 1979 to 53% of optimum in 1990, and by 2001 was 62% (good condition) of optimum. Pool/riffle ratio and pool quality were fairly good on Salmon Falls Creek compared to the smaller Dry Creek, Jakes Creek, and Bull Camp Creek. Salmon Falls Creek within the Hubbard/Vineyard Allotment appears to be a sand streambed type with limited potential to develop more desirable streambottom materials. Improved riparian and stream habitat condition reflect a change in livestock management practices implemented in 1999. No new data were collected in 2006.

3. Prevent undue degradation of all riparian/stream habitat due to other uses.

The original 1997 evaluation stated that attainment of this objective would be measured through improvement of riparian conditions on 6.7 miles of Bull Camp Creek. Bull Camp Creek did not have any specific management objectives due to its status as a “low priority” stream as set by the Wells RMP. Stream survey data for Bull Camp Creek are summarized in Appendix 3; however, no further conclusions are drawn.

Barite mining at the head of Dry Creek during the 1970s and 1980s used an access road paralleling and crossing Dry Creek. Trucks moved ore from the head of Dry Creek and sites on the west side of the Snake Range down the Dry Creek access road to a reload site just above the Dry Creek Ranch (see 2.6 Mining Activities for additional details).

This mining access road was not maintained and a stream crossing on Dry Creek above the Dry Creek Ranch washed out in 2006 during heavy spring runoff. It appears culverts on the road filled with debris and the road acted as a dam with water spreading out above the road, spilling over and cutting the road fill material. The culverts were washed out and the stream downcut the stream channel 10 to 15 feet or more in depth above and below the road crossing. Large amounts of silt, sand, and gravel were deposited less than ½ mile downstream at the head of a private pasture. The access road has since been repaired to allow miners access to the mining properties again.

A high tension power line also crosses the Hubbard Vineyard allotment with two track access roads crossing streams in the lowland pastures. Some erosion is present at stream crossings along these roads on both public and private lands, as well as runoff from irrigated private pastures

1.2 O'Neil/Salmon Falls Habitat Management Plan (HMP) Objectives

Progress toward attainment of these objectives are included under the conclusions for allotment RPS, riparian, and key area objectives.

- a. Improve to or maintain in at least good condition all deer use areas in the O'Neil/Salmon Falls RCA.
- b. Modify or reconstruct up to 140 miles of fence emphasizing, in priority order (1) migration routes, (2) winter ranges, (3) spring ranges, and (4) other use areas.

Note: 35.1 miles of existing fence are to be modified within the Hubbard Vineyard Allotment.

- c. Achieve reasonable numbers (90, yearlong) of bighorn sheep in the vicinity.

Note: reasonable numbers of bighorn sheep is 10 within the Hubbard Vineyard Allotment.

- d. Improve 43 springs and wet meadows, presently in poor or fair condition, to good or excellent condition (seven of the 50 spring projects authorized for the RCA by the Wells RMP are "allocated" to the Badlands bighorn sheep).

Note: 10 springs within the Hubbard Vineyard Allotment are to be improved, enhanced, or developed to good or excellent condition.

2. Key Area Objectives

a. HV-01 Flat Pasture

- 1. Short-term: Do not exceed an average annual utilization of 50%, or 55% utilization in any one year on bluebunch wheatgrass (AGSP) and Thurber's needlegrass (STTH2) (during years this pasture is grazed).

Partially Met. From 1986 to 2008, average annual utilization did not exceed 50%; however, utilization did exceed the maximum 55% in any one year, in 2008.

2. Long-term: Maintain or improve ecological status to a low late seral (51 points) stage by 2005.

Met. In 1986, the ecological condition was late seral stage (51%), but by 1990 the ecological condition declined to mid seral stage (48%). However, this increased back to late seral (51%) in 2004.

The BLM observed a slight decline in the ecological status at this key area between 1986 and 1990. The original evaluation concluded that this was the result of the repeated spring grazing use within this pasture and the 6-7 year drought cycle of the late- 1980's to early 1990's. The relatively poor soils of the site (high silt content, low organic matter, and low aggregate stability) and the location on the landscape (a flat area subject to evaporation of soil moisture for most of each day) also contributed to the decline and at the same time limited the potential for improvement.

b. HV-02: Lower Hubbard Pasture

1. Short-term: Do not exceed an average annual utilization of 50%, or 55% utilization in any one year on Indian ricegrass (ORHY) (during years this pasture is grazed).

Met. From 1986 to 1997, average annual utilization did not exceed 50%, and utilization did not exceed 55% in the nine years use was measured.

2. Long-term: Improve ecological status to a low late seral (51 points) stage by 2005.

Undetermined and Inapplicable. The BLM initially determined this key area to be in the 025XY014NV range site, which is dominated by big sagebrush, bluebunch wheatgrass, and Thurber's needlegrass. Based on this premise the BLM designated bluebunch wheatgrass and Thurber's needlegrass as the key species. However, neither of these species appeared in the frequency or production studies conducted in 1986 and 1990, and the species are not common in the study area. These factors prompted the BLM in 1993 to change the key species to Indian ricegrass, the most dominant desirable grass species in the area.

Within the soil map unit where Key Area HV-02 is located, the ecological sites that support Indian ricegrass are co-dominated by black sagebrush, and those sites dominated by big sagebrush contain very little Indian ricegrass. This leads the BLM to conclude that this key area most likely sits on an area that contains elements from several different ecological sites, which would make any assessments of ecological status inapplicable.

c. HV-03: Upper Hubbard Pasture

1. Short-term: Do not exceed an average annual utilization 50%, or 55% utilization in any one year on bluebunch wheatgrass (AGSP) and Thurber's needlegrass (STTH2) (during years the pasture is grazed).

Met. From 1986 to 1997, average annual utilization did not exceed 50%. The 55% maximum utilization level was exceeded in one year (1986), but only by 1%.

2. Long-term: Improve ecological status to a low late seral (51 points) stage by 2005.

Met. In 1986 the ecological condition was mid seral (44%) and in 1990 the ecological condition was late seral (58%). This site remained at late seral (58%) in 2004.

This key area burned in the 2000 Cold Springs Fire. The fire eliminated most of the sagebrush from the key area location, although islands of unburned sagebrush remain nearby.

d. HV-04: Reservoir Seeding Pasture

1. Short-term: Do not exceed an average annual utilization of 55%, or 65% utilization in any one year on crested wheatgrass (during years the pasture is grazed).

Met. From 1986 to 1995, average annual utilization did not exceed 55%, and utilization did not exceed 65% in the five years use was measured.

2. Long-term: Achieve and maintain crested wheatgrass production of 500 lbs/acre (air-dry weight).

Progress is not being made. In 1986, the crested wheatgrass production was 347 lbs/acre; by 1990 it was 262 lbs/acre. The production further declined to 110 lbs/acre in 2004. This seeding was established in 1952 as part of a halogeton control program established in Elko District. This seeding was seeded in poor soils (high silt content, low organic matter, and low aggregate stability). These soils have a high concentration of exchangeable sodium, and during years with less than average growing season precipitation crested wheatgrass plants could tend to produce less forage and in some cases may actually die off. The monitoring results tend to correlate with both of the above factors. The climatic adjustment factor (CAF) for 1986 was 0.98, with 1.0 representing a normal precipitation year. 1990 had a CAF of 0.73 and came after three consecutive years of lower than normal precipitation years; 2004 had a CAF of 0.79 and came after five consecutive years of below normal precipitation.

e. HV-05: Hubbard Seeding Pasture

1. Short-term: Do not exceed an average annual utilization of 55%, or 65% utilization in any one year on crested wheatgrass (during years the pasture is grazed).

Met. From 1986 to 1995, average annual utilization did not exceed 55%, and utilization did not exceed 65% in the eight years this key area was read.

2. Long-term: Achieve and maintain crested wheatgrass production of 500 lbs/acre (air-dry weight).

Progress is not being made. Crested wheatgrass production in 1986 was 618 lbs/acre, but by 1990 it had declined to 334 lbs/acre. In 2004 production improved, but only to 389 lbs/acre. This seeding was established in 1952 as part of a halogeton control program. This seeding was seeded in poor soils (high silt content, low organic matter, low aggregate stability, and shallow). These soils have a high concentration of exchangeable sodium, and during years with less than average growing season precipitation crested wheatgrass plants could tend to produce less forage and in some cases may actually die off.

f. HV-06: Middle Pasture

1. Short-term: Do not exceed an average annual utilization of 50%, or 55% utilization in any one year on Indian ricegrass (ORHY), bluebunch wheatgrass (AGSP), and Thurber's needlegrass (STTH2) during years the pasture is grazed.

Met. Utilization in 2002 was 24% on Indian ricegrass.

g. HV-07: Middle Pasture

1. Short-term: Do not exceed an average annual utilization of 50%, or 55% utilization in any one year on Indian ricegrass (ORHY), bluebunch wheatgrass (AGSP), and Thurber's needlegrass (STTH2) during years the pasture is grazed.

Met. Utilization in 2002 was 25% on Indian ricegrass and 33% on bluebunch wheatgrass.

h. HV-08: Triangle Pasture

1. Short-term: Do not exceed an average annual utilization of 50%, or 55% utilization in any one year on bluebunch wheatgrass years the pasture is grazed..

Not Met. Utilization on bluebunch wheatgrass in 2002 was 57%.

3. Northeastern Great Basin Standards and Guidelines for Rangeland Health

This section makes final determinations regarding:

- A. Progress towards or attainment of the standards for rangeland health,
- B. Whether livestock management is in conformance with the guidelines, and
- C. Whether existing grazing management or levels of grazing use are significant factors in failing to achieve the standards or conform to the guidelines.

a. Upland Sites: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and landform.

This standard for rangeland health is being Met in most areas, and livestock grazing management is considered to be in conformance with the guidelines.

The determination is based largely on evaluation of the RPS objectives 1, 2, and 3 and key area objectives for HV-01, HV-02, HV-03, HV-04 and HV-05 presented above. The results of the long term key area studies indicate that ecological status and condition is being at least maintained on much of the allotment, which translates into sufficient amounts of vegetation present to protect soil resources. Variations noted across years appear to be more connected with precipitation levels than any other factors. Livestock distribution continues to be an issue in some pastures, but the periodic resting of a portion of the allotment each year allows plants to complete their growth and reproductive cycles. The BLM has observed little to no soil movement on most parts of the allotment.

The few areas of abnormal soil erosion are almost always associated with the old mine roads. The roads received little to no maintenance after the first era of large scale mining activities ceased in the early 1980's. The revival of the mines has brought regular maintenance back to some of these roads. The portions of the allotment with deficiencies in vegetation cover noted appear to be chiefly caused by natural limiting factors in the soils.

b. Riparian and Wetland Sites: Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.

Significant progress is being made in the attainment of this standard on the allotment as a whole. Livestock grazing is in conformance with the guidelines in some areas and not in conformance with the guidelines in other areas.

This determination is based on the evaluation of the RPS riparian/stream habitat objectives 2c(1), (2), and (3), and HMP objectives 3d presented in the evaluation and as modified above. The lotic areas in the mountain pastures have shown steady improvement in riparian conditions; however, the pastures on the east side of the allotment are not showing a similar level of improvement. This is due to a combination of past livestock grazing management and natural factors such as flood events and site potential. Bull Camp Creek is additionally impacted by irrigation of private fields it flows through, which causes most of the lower reaches to be dry in most years. Lentic riparian areas have shown dramatic improvements across the allotment, with the number of springs in Proper Functioning Condition increasing from zero in 2003 to 24 in 2007.

Water quality monitoring results on the Hubbard Vineyard Allotment tend to show that livestock grazing management is allowing for attainment of this standard. The South Fork of Salmon Falls Creek, which flows through a portion of the northern tip of the Hubbard Vineyard Allotment, is classified as an impaired water; however, the monitoring location where this determination is made is located approximately 20 miles downstream from the allotment. This stream drains a large area with many land uses, and as such it is impossible to determine what contributions livestock management in the Hubbard Vineyard Allotment makes to this impairment. Water quality is generally good throughout the allotment, with livestock grazing playing a minor role in noted water quality impairment factors. Most of the water quality impairment factors appear to be due to natural causes.

c. Habitat: Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.

Significant progress towards the attainment of this standard is being made. Livestock grazing is considered to be in conformance with the guidelines across most of the allotment.

This determination is based on evaluation of RPS Objectives a.1, 2 and 3; b. 1, 2 and 3 and c. 1, 2 and 3, and all Key Area Objectives presented within the evaluation for the Hubbard Vineyard Allotment. Based on key area objectives, a.1., b.1., c.1., d.1., and e.1., the objectives established for average annual utilization were met at all key areas. Ecological condition objectives a.2., b.2., and c.2., were met for two of the three native key areas and production had significantly increased for the native areas. Frequency studies were established at three livestock key areas in 1986; all were reread in 1990 and 2004. All the studies areas exhibited a fair amount of decadence in the sagebrush component. This decadence was offset by the majority of key areas exhibiting a good recruitment of young sagebrush plants, except at key area AW-1-T-02 which exhibited significant sagebrush die off with little recruitment. These studies showed no significant downward trends in key species with key species occurrence either being static or up. Wildlife specific objectives, b.1., b.2., and b.3, included maintaining or improving all big game habitat in good or excellent condition, modifying 35.1 miles of existing fence to Bureau

standards to facilitate big game movement, and re-introducing big horn sheep in the Bad Lands; b.1. was partially met and b.2. and b.3. were met. The summarization of data analyzed to address RPS objectives c.1., c.2., and c.3., shows that in regard to stream survey data collected within the allotment, significant progress is generally being made in the upper elevations on stream systems with less improvement on the lower elevation flats. Lotic PFC was conducted in conjunction with stream survey studies in 2006 on Jakes, Bull Camp and Dry Creek. Results showed improvement in functionality for Jakes and Bull Creek and decline on Dry Creek. Fifty-one lentic springs and seeps were evaluated in 2007. Approximately half of these (53%) were rated as Proper Functioning Condition or Functioning at Risk with an Upward Trend.

The Columbia spotted frog (candidate species) is known to occur within the allotment, and the Northern leatherside (*Lepidomedina copei*) has been identified in the Salmon Falls River system and is potentially present in Salmon Falls Creek within the allotment. Attainment of riparian standards and objectives is expected to provide for the biological needs of the spotted frog, Northern leatherside, and Interior redband trout. Improvement of quality pools, pool:riffle ratio, desirable stream bottom, streambank cover, and other parameters will continue to improve conditions for the Columbia spotted frog, and for Interior redband trout (BLM sensitive species). Most of the habitat for the Columbia spotted frog and Interior redband trout occurs in the mountain pastures, which have the improving stream segments identified in the 2006 stream survey and lotic PFC analysis. Approximately 50 percent of the stream segments were rated PFC in 2006. Potential Northern leatherside habitat would occur on Salmon Falls Creek, which is in “good” riparian condition.

d. Cultural Resources: Land use plans will recognize cultural resources within the context of multiple use.

This standard for rangeland health is being Met, and livestock grazing management is considered to be in conformance with the guidelines.

Numerous cultural resource inventories have been completed within the 110,855 acre allotment, but the overall percentage that has been inventoried is very low. Cultural resource sensitivity varies considerably from low in some of the upland areas to very high in some of the lowlands. Condition of cultural resource sites is largely unknown at this time. Known and anticipated impacts to cultural resources are analyzed in the Environmental Assessment.

Summary of Final Determinations by pasture for each standard

Table 3 below summarizes the final determinations for each fundamental of rangeland health by pasture for the Hubbard Vineyard Allotment.

Table 3: Summary of Final Determinations by Pasture						
Pasture	Standard 1	Standard 2		Standard 3		Standard 4
		Lotic	Lentic	Uplands	Riparian	
Flat	M	NM (2,4)	M	M	SP (2,4)	M
Reservoir Seeding	M	N/A	N/A	M	N/A	M
East Hubbard Seeding	M	N/A	N/A	M	N/A	M
West Hubbard Seeding	M	N/A	N/A	M	N/A	M
Upper Hubbard Basin	M	N/A	NM (2,4)	NM (1)	NM (2,4)	M
Lower Hubbard Basin	M	N/A	NM (2,4)	M	NM (2,4)	M
Devils Table	M	M	N/A	NM (4)	M	M
Jakes Creek Mountain	SP (3)	M	M	M	M	M
Dry Creek Seeding	M	N/A	N/A	M	N/A	M
Coon Creek	SP (3)	N/A	NM (2,4)	M	NM (2,4)	M
Bull Camp	SP (3)	M	M	M	M	M
Cold Spring Mountain	M	N/A	N/A	M	N/A	M
Schoer Field	M	N/A	N/A	M	N/A	M
Purebred	M	N/A	N/A	M	N/A	M
Middle	M	NM (2,4)	M	M	M	M
Triangle	M	N/A	NM (2,4)	M	NM (2,4)	M
Dry Creek Mountain	SP (3)	SP (2,4)	M	M	M	M
M=Met; SP=Some Progress; NM=Not Met; N/A=Not Applicable/No Data						
Causal Factors: 1=Fire; 2=Livestock Grazing; 3=Mining; 4=Natural Factors						

/s/

Bryan K. Fuell
Manager, Wells Field Office

May 20, 2010
Date